

Name_____

Date_____

ESTIMATING THE SIZE OF FRACTIONS BY USING BENCHMARKS

When is a fraction closest in size to 0, $\frac{1}{2}$, or 1? Check the benchmark that is closest in size to each fraction. The first one has been done for you.

Use <http://illuminations.nctm.org/ActivityDetail.aspx?ID=44> to help you.

<i>Fraction</i>	0	$\frac{1}{2}$	1
$\frac{5}{12}$		✓	
$\frac{9}{10}$			
$\frac{2}{11}$			
$\frac{17}{19}$			
$\frac{7}{13}$			
$\frac{3}{20}$			
$\frac{6}{14}$			
$\frac{1}{16}$			
$\frac{15}{17}$			

What do you notice about the fractions that are closest in size to 0?

What do you notice about the fractions that are closest in size to $\frac{1}{2}$?

What do you notice about the fractions that are closest in size to 1?

Estimate each sum or difference by rounding each term to the nearest whole number first. Show what you rounded to.

$$8\frac{2}{9} - 3\frac{6}{7}$$

$$7\frac{4}{5} + 11\frac{1}{10}$$

$$8\frac{5}{9} - 5\frac{2}{3}$$

Estimate each product by rounding each factor to the nearest whole number. Show what you rounded to.

$$7\frac{1}{5} \times 10\frac{9}{11}$$

$$5\frac{6}{7} \times 2\frac{1}{9}$$

$$9\frac{1}{6} \times 4\frac{7}{8}$$

Estimate each quotient. Round the dividend and divisor to whole numbers that are reasonably close and compatible. Show what you rounded to.

$$71\frac{1}{5} \div 7\frac{7}{8}$$

$$64\frac{2}{7} \div 6\frac{5}{6}$$

$$79\frac{2}{3} \div 9\frac{1}{5}$$

Explain a strategy for rounding quotients. Remember to discuss compatible numbers in your explanation.
